

CLAIMS:

1. A broadcast system for broadcasting data includes a hierarchical network of data distributors starting from one central distributor through at least one layer of intermediate distributors to a plurality of broadcast receivers for broadcasting the data through downstream channels of the network to the plurality of broadcast receivers; at least 5 one distributor hierarchically below the central distributor being operative to insert broadcast data in at least one up-stream channel of the network towards the central distributor; the central distributor being arranged to re-distribute broadcast data received via at least one up-stream channel through at least one downstream channel of the network.
- 10 2. A broadcast system as claimed in claim 1, wherein data blocks of a title are striped over storage of a plurality of distributors for subsequent insertion as broadcast data in at least one up-stream channel.
- 15 3. A broadcast system as claimed in claim 2, wherein a plurality of distributors over whose storage the title is striped are operative to insert stored blocks in at least one data channel of the network under control of one common distribution protocol enabling substantially uninterrupted receipt of a stream of blocks from the plurality of distributors by broadcast receivers.
- 20 4. A broadcast system as claimed in claim 3, wherein at least two of the plurality of the distributors are operative to insert stored blocks in a respective sub-channel of one data channel.
- 25 5. A broadcast system as claimed in claim 3, wherein at least two of the plurality of the distributors are operative to insert stored blocks in different data channels of the network.
6. A broadcast system as claimed in claim 3, wherein the common distribution protocol is a near-video-on-demand protocol for distribution of a title through at least two

network channels of different repetition rates of blocks assigned to the channel; blocks assigned to a highest repetition rate channel being inserted by a first group of distributors; and blocks assigned to a lowest repetition rate channel being inserted by a second group of distributors; distributors of the first group being hierarchically higher than distributors of the 5 second group.

7. A broadcast system as claimed in claim 1, wherein the broadcast system includes a distribution controller for controlling insertion of broadcast data in the upstream channels and/or sub-channels of the network.

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8. A broadcast system as described in claim 7, wherein the distribution controller is operative to provide data blocks to a plurality of distributors for subsequent insertion in at least one upstream channel and/or sub-channel.

15 9. A broadcast system as claimed in claim 1, wherein at least one broadcast receiver is operative to insert broadcast data in at least one upstream data channel and/or sub-channel of the network.

10. A broadcast system as claimed in claims 2 and 9, wherein a plurality of 20 broadcast receivers are operative to insert broadcast data in at least one upstream data channel and/or sub-channel of the network; each of the plurality of broadcast receivers including a respective storage; and a title being striped over the storage of the plurality of receivers.

25 11. A broadcast system as claimed in claim 10, wherein the storage includes a solid state memory.

12. A broadcast system as claimed in claim 1, wherein the intermediate 30 distributors are operative to split and/or filter the broadcast data towards the broadcast receivers.

13. A method of broadcasting data streams through a hierarchical network of data distributors starting from one central distributor through at least one layer of intermediate distributors to a plurality of broadcast receivers for broadcasting the data streams through

downstream channels of the network to the plurality of broadcast receivers; the method including:

inserting broadcast data at at least one distributor hierarchically below the central distributor in at least one up-stream channel of the network towards the central

5 distributor;

receiving broadcast data via the up-stream channel of the network; and

re-distributing the received broadcast data through at least one downstream channel of the network.

10 14. A broadcast receiver for use in a broadcast system as claimed in claim 1, wherein the broadcast receiver is operative to receive data blocks broadcast through at least one downstream channel of the network for subsequent rendering; and to insert broadcast data in at least one up-stream channel of the network towards a central distributor for re-distributing by the central distributor through at least one downstream channel of the network.

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15. A broadcast distribution controller for use in a broadcast system as claimed in claim 1; the distribution controller being operative to control synchronized insertion of broadcast data in at least one upstream channel and/or sub-channel of the broadcast network.

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16. A central broadcast data distributor for use in a broadcast system as claimed in claim 1, the central broadcast data distributor being operative to re-broadcast broadcast data received via at least one up-stream channel through at least one downstream channel of the network towards a plurality of broadcast receivers.

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17. An intermediate broadcast data distributor controller for use in the broadcast system as claimed in claim 1 that includes a hierarchical network of data distributors starting from one central distributor through at least one layer of intermediate broadcast data

30 distributors to a plurality of broadcast receivers for broadcasting the data streams through downstream channels of the network to the plurality of broadcast receivers; the intermediate broadcast data distributor being operative to insert broadcast data in at least one up-stream channel of the network towards the central distributor for re-distribution of the broadcast data by the central distributor through at least one downstream channel of the network.